

PERISTALTIC PRECISION METERING DEVICE, SYSTEM AND METHOD OF USE THEREOF

Abstract of the Disclosure

The invention relates generally to a peristaltic precision metering device, system
5 and method of using the same. Disclosed is a metering device which includes a metering
element that can engage with a compressible material line, wherein the metering device
can place a selectable peristaltic effect upon the material in the line. Also disclosed is a
precision metering system that includes a material delivery unit comprised of a material
reservoir, material dispensing end, and a compressible material line connecting the two; a
10 base; and, a metering element that engages the material line between itself and the base,
and the metering element places a peristaltic effect on the material in the line, from which
a selectable unit of material is caused to be dispensed from the dispensing end. Also
disclosed is a metering device comprised of a slidable or rotatable metering element that
can engage with a compressible material line, and when slid or rotated places a peristaltic
15 effect upon material in the line, further causing precision dispensing of a unit of material.
Also disclosed is a metering system comprised of a metering device similar to above and
a control system attached to the metering element and a robotic positioning system also
attached to the metering device. Finally disclosed is a method of precision material
dispensing comprised of providing a metering element and base, positioning a
20 compressible material line between the metering element and base, moving one of the
base, metering element, material line, or combination thereof, thereby causing a

peristaltic effect upon material in the line, and dispensing a precise unit of material from the device.